



Amendments to the Specification

IN THE TITLE

Please change USPTO records to indicate that the title to be used in this application is **GRAPHITE ELECTRODE FOR ELECTRIC ARC FURNACE**, which title coincides with the title appearing in the English translation of the specification and on the Declaration.

IN THE ABSTRACT OF THE DISCLOSURE

Attached hereto is a replacement Abstract with markings to show amendments.

IN THE WRITTEN DESCRIPTION

Please replace the DISCLOSURE OF THE INVENTION section with the marked-up copy of the section enclosed herewith.

Please add the following new paragraph after the paragraph ending on line 16 of page 4:

FIG. 7 is a view showing the spraying of a cooling liquid on the uneven structure of the present invention.

Please replace the paragraph beginning at page 5, line 1, with the following rewritten paragraph:

Among the above uneven structures, it is preferable to form an uneven structure by forming a groove in the direction perpendicular to or almost perpendicular to the flow of a cooling liquid sprayed onto the surface of the electrode by a machining process such as lathing. A structure in which a spiral groove 2 is formed on the surface of a graphite electrode 1 as shown in FIGS. 1 and 2 is most preferable in practice from the viewpoint of ease of working or the like. The uneven structure may be formed on the entire surface of the electrode. The uneven structure may be formed on the surface of the electrode excluding the holding portion.

Please replace the paragraphs beginning at page 6, line 7, with the following rewritten paragraphs:

~~The~~As shown in Fig. 7, the cooling liquid sprayed onto the surface of the electrode from a sprayer or a nozzle shower functions as described below while flowing on the surface of the electrode by forming the uneven structure on the surface of the electrode, thereby contributing to an increase in cooling efficiency of the electrode.

(1) The flow rate of the cooling liquid is reduced due to the uneven structure on the surface of the electrode. This allows a film of the cooling liquid to uniformly spread over the surface of the electrode. Moreover, since the thickness of the film is increased, the water retention effect is increased. This contributes to an improvement of the cooling effect.